432 AND ABOVE EME NEWS

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CONDITIONS:

Many Feb reports refer to low activity. Activity may seem low, but we should remember that operation is much more spread out than in the past. Today more stations operate both 70 and 23 cm than ever before... and the bands 13 cm above are really taking off. It is hard to believe activity is low and read OK1CA's 23 cm report, or WB5LUA's report on microwave band operation. Considering that in the northern hemisphere, this winter produced some of the worst WX in years, my area has accumulated the most snow ever recorded, we should be saying activity is exceptionally GOOD.

REF CONTEST:

Yes it is here: 2/3 March for 1296 [and 144] and 23/24 March for 432 and 2300 up!

DX NEWS:

F5FHI plans to be QRV from 9U/F5FHI later this year. He will be in 9U land 8 days, and will try Satellite 1st, and then 70 cm EME with 4 yagis. CX9BT is QRT because of work and political problems. HP3XUG will be QRT for about a month to refurbish his antennas.

7M2PDT, Syukou

(QM05ek) reports -- I got my EME license on 30 Jan and immediately worked JA9BOH (O/O) for initial #1 and JS3SIM (M/M) #2, on 2 Feb SM3AKW (O/O) #3, and on 3 Feb JH0YSI (O/O) #4, JA4BLC (O/M) #5, DL9NDD (O/O) #6, DL9KR (O/O) #7 and DK3WG (O/M) #8. (7J-7N are the calls signs of JA1 area.) Syukou's system consists of 6 x 25 el yagis (will replace with 6 x FO 33 el yagis in mid Feb) and Henry 2004A (3CX800A7) 600 w PA. He is interested in skeds, and can be reached via E-mail at 7M2PDT, Syukou . His mail address is (7324-2 seki Shirako-machi, Chousei-gun, Chiba 297 JAPAN), and TEL/FAX is 81-475-33-7979.

AA6WI, Hoppie

sends in his Jan/Feb 23 cm EME Report: I worked on 06 Jan AA4TJ, WB5LUA and N2IQU through partial tree blockage, also heard were W2UHI and G4DZU, and on 07 Jan KB2AH and heard DL0SHF and DF3RU. Apologies to DF3RU for not copying his call when he answered one of my CQs. I was trying out a Timewave DSP- 59+ filter, and was not having much luck. After the weekend was over, I returned the filter and reinstalled the old' trustworthy Autek QF-1A! The Autek "peak" mode works wonders for a small antenna where signals are in the noise most of the time. The trade-off between the noise and ringing is QSO count!! I've tried most DSP filters, and keep going back to the Autek. However, I'm sure the others work FB with larger dish stations. I QSO'd on 20 Jan WD5AGO (CW and SSB), on 03 Feb K5JL, AA4TJ, KB2AH and VE6TA - - also heard were N2IQU and G4DZU, Sun Noise at 2100 was 12.5 dB with SF of 76 (on 3.7 m dish), and on 04 Feb KB2AH, OK1CA, N2IQU, VE4MA, KD5RO, AA4TJ, N2IQU (on SSB), SM3AKW and VE6TA (329). My new job consists of a bit of travel, so SW par ticipation will be "hit and miss" throughout 1996.

DL6NAA, Reinhold

worked 1 Dec, on sked UT5DL, on random K1FO, WA4NJP and SM3AKW, W1ZX heard, and nil on skeds with EA3UM, WB0DRL and JA2JRJ; on 2 Dec JA4BLC, partial JA5OVU, DL9NDD and HB9SV, heard were EA2LU, HA1YA, JH0YSI and JS3SIM, and nil on sked with JA2JRJ, ZS6AXT and F5ELL; on 3 Dec VK5MC; and later in Dec VI100GM on random.

DL9NDD, Gunther

found Oct/Nov conditions very good to Eur, but poor otherwise, especially to NA. He made initials with DK8LV, JR9NWC, DL0AR, CN2EME, JH0YSI, F5JJI, HB9SUL, DL0UL, DK4VW (4 yagis and 750 w with no el), F5FLN and OM1TL. He worked on 2 Dec JA4BLC, DK8LV, JS3SIM for an initial (#), JH0YSI, I5CTE and K5GW #, on

Il Dec VI100GM, on 30 Dec DL4KG #, DL8YHR #, DL6NAA and JA9BOH, and on 3 Feb DL80BU, 7M2PDT #, K5GW and JA6XED #, to bring Gunther to #231.

G3HUL, Doug

is now using 8 x 24 el yagis and has 600 w from an aging pair of 4CX250s. He was active during the recent SW and picked up 2 initials DL3WG and K5GW, both (559/559), despite a very low activity level. Doug's totals now stand at initial #104 and 30 DXCC. He is not sure about his US states standing.

G3LTF, Peter

sends good news -- I got permission for the dish to go up. It will be just under 6 m dia based on the one I used previously, and thus about 0.38 F/D. I have to do some fairly serious excavation for the base, and so I can't give a date yet for my return to the moon, but it'll start as soon as the WX allows. I also have got agreement for the building changes to start the shack construction. I was in Phoenix, AZ recently and was delighted to see Charlie, W7GBI and XYL Veda. I spent an hour or so looking at the shack and those big boxes that make his signal so loud! Now I know why I can hear him so well on 2304. I'm pleased to say that he looks well and is in good shape with good reports from the doc.

G4DZU, Doug

writes -- I had a good time during the Jan SW. Running 400 w with 1.8 dB of feeder loss and my 10' dish, I worked on the 4th/5th N2IQU, LA8LF and KB2AH - all on random. I also heard AA6WI, but my dish was pointing through the bushes. Nothing was heard from K2UYH. I am now hearing my echoes in a 2 KHz bandwidth. I will be QRV for the Feb SW.

HB9BHU, Friedrich

reports -- I was not very active in Dec and Jan. I did work on 31 Dec, on 1296, F1ANH and JA4BLC, and on 7 Jan N2IQU, DF3RU and DL0SHF. For all OMs still waiting for my QSL card, it should not be too much longer now. I have redesigned my QSL card and am waiting for the new cards to arrive. In the past, I spent a lot of time developing a Flash Limiter (to protect sensitive power tubes). The result works quite well. With this unit there is no chance to kill a tube! If there is enough interest, I will make the PCBs available for others. My 23 cm Subwoofer (TH347) project is still on hold, because I have focused my recent activities on 3 cm. My equipment is ready for tropo operation now. I am increasing the accuracy of my 3.7 m solid Andrew dish, and adding an improved drive control with a .10 deg resolution readout. I am also planning to attend the 1996 International EME conference.

JA4BLC, Yoshiro

writes -- This weekend (3/4 Feb), I worked JA2KRW and 7M2PDT for initial #228 on 432, and F1ANH, IK3COJ, SM3AKW, DD1XF for initial #51 and OK1CA #52 on 1296 MHz. Nothing was heard on the sked with DK8LV on 432, and extra skeds with

VE6TA on 1296. Recently our Authority for radio licenses told me that there is a possibility for me to get license for high power on 6 cm EME. They told me that it's impossible to get permission for transmission on 5760, but 5650-5652 MHz is a possibility. They understand the difficulty with split frequency operation, but they can not allow me to operate on 5760 MHz according to the present rules. I have, thus, decided to make use 5650.0 MHz for TX and 5760 MHz for RX (completed now), and wish EME friends to make 5650 MHz receiving converter for us. As my IF on 5760 is 1296, 5650 TX signal will be obtained with a 1186 MHz IF generator. I hope to be QRV on 5650 with 22 w (DL2AM FET amp) at the feed of a 6 m dish fed by a linear pol W2IMU horn, before this summer.

JH0SI, Toshio (JA0HVL)

fills us in on the actives of his group. The ops are himself, JA0RWF (Yasu) and JA0JCJ (Hiro). They recently completed an array of 32 x 22 el K1FO yagis. Half the array is mounted horz pol, and the other half vert pol, with switching. They are also working on a 5 m dish for operation on the higher bands.

JR9NWC, Tany (PM85bw)

QSO'd on 27 Jan at 0316 K1FO (539/439), 0451 JS3SIM (O/O) for initial #34, 1210 JH4JLV (O/O) #35, 1300 JA2KRW (539/449) and 1315 DL9KR (559/559). Heard were DL8OBU and I5MPK - very weak. Tany is running 8 x 21 el horz pol yagis and 1000 w from a 3CX800A7-2 PA. He can be reached at E-mail Tany, JR9NWC

K1FO, Steve

found good activity from Japan on the weekend before the SW, as local time during the US-JA window was at reasonable hours. He worked on 27 Jan JR9NWC and JA2KRW, and on 28 Jan JA5OVU and W9QXP. Conditions on the days before the SW were phenomenal with virtually no Faraday rotation! Unfortunately there was very little activity during the week. He worked on 02 Feb K5GW, WB6IMC (M/0) for initial #487, OK1KIR, G4ERG and I5TDJ, and on 03 Feb UR5LX, W9QXP, K6HXW, DL3YEL, G4ERG, G3SEK and OE3JPC. Steve's 70 cm EME totals are now #487 initial, 49 states and 74 DXCC.

LA8LF, Anders

was not on for the Feb SW due to heavy icing and cold WX -- I did not want to risk AZ motor damage. I QSO'd on 23 cm, on 2 Dec JR4AEP for initial #83, ZS6AXT, JA4BLC, OH2AXH, DD1XF, N2IQU, DJ9YW, GW3XYW, VE1ZJ, IK3COJ, KB2AH, W2UHI, K2UYH, AA6WI and AA4TJ, on 3 Dec SM2CEW, OE9XXI (SSB), VE1ZJ and DF3RU, on 6 Jan HB9BBD, DD1XF, IK3COJ, F2TU, DF3RU, S59DCD #84, JA4BLC, G4DZU #85, ZS6AXT and N2IQU, and on 7 Jan SM2CEW. If WX permits, I will be on for the DUBUS Contest in March. I will be in the receive mode on 13 cm in April, and will then also test my 5 m solid dish's performance on 3 cm using a TV-LNB to measure sun and moon noise.

N7ART, Russ

has been having a very rough winter WX wise. Although some of his other antennas have been damaged, the dish is holding up well. The bad WX has limited his operating. When has been able to get on the moon, on 23 cm, he has been pleased with the results. He is using a YL-1050 cavity amp of his own design . It easily produces 500 w with 2100 Vdc. He can get considerable more out, but does not want to push the tube, considering its scarcity. He drives the 1050 with a single water cooled 7289, and that with a M67715 solid state module. As a feed for his 26=92 dish, he is using a diagonal waveguide with internal polarizers. His LNA is a DJ9BV special.

OK1CA, Franta

returned to 1296 for the Feb SW with a new BV FXH35 LNA and 2 x 2C39B 140 w PA. He QSO'd I2FGT (O/O) for an initial (#), F1ANH (559/439), DD1XF (O/O) #, SM3AKW (559/549) #, JA4BLC (449/449) #, DF9QX (O/439) #, IK3COJ (449/449) #, GW3XYW (559/559) #, VE1ALQ (559/449) #, OZ4MM (559/559), KD5RO (339/439), W2UHI (549/539) #, KB2AH (559/449), WB5LUA (539/449) #, AA4TJ (449/449) #, AA6WI (449/439), VE4MA (339/439), N2IQU (559/549) to bring him to initial #31. Heard were HB9SV and K5JL. Franta expects to be QRV again on 23 cm in April or May.

OZ4MM, Stig

reports -- Back in Jan, I worked JA4BLC on 2304/2424 (439/449) for the 1st JA-OZ QSO on 13 cm. In Feb I could only find time to be on a few hours, and worked on 1296 OK1CA (559/559), HB9SV (569/569), N2IQU (569/559), IK3COJ (549/559), W2UHI (549/579) and F1ANH (569/569). I listened for about 15 min on 432, and heard lots of FB signals! I will be on for the REF contest in March, if weather permits. Please note my new E-mail addr: Stig, OZ4MM

SM2CEW, Peter

writes -- I was active on 432 and 1296 again, finding conditions quite good. I worked on 432 on 3 Feb DL8YHR for initial #303 and G4ERG, and on 4 Feb JA6XED #304 and EA3DXU. On 1296, I worked on 3 Feb GW3XYW, IK3COJ for initia; #83 and VE1ALQ #84. I was also QRV on 1296 the weekend before (28 Jan) and QSO=92d I6PNN, W2UHI, KB2AH and VE6TA, all on random.

UR4LL, Alex's

plans to attend the '96 EME Conference are progressing on schedule, and all looks well for success. He is working on a new array, and plans to be on 432 EME from his home sometime this year. Alex reports that UR5LX, Sergey, in Nov logged initials with DK8LV, DL4MEA and JA2ODV for initial #276. He was not active after the contest, because of a failed transformer in his PA=92s HV supply. He was back to 3 KW from his new GS17B final for the Jan SW, and worked DJ6MB, but then had another HV problem develop which forced him off the air again. UT1PA lost his 27

year old son in an automobile accident, and has not been active since this tragedy. Now he seems to be getting back to normal. UT5UAS is QRT. Alex has been having a terrible time with vodka, and sold all his equipment to pay for his needs. The situation is not good.

VE1ALQ, Darrell

writes about his Feb activity -- Nil from W4RDI... but Peter, SM2CEW called me nearing the end of this sked (549/559) for initial #57, also worked on random OK1CA (449/549) #56, nil VE3BQN, nil K9KFR, nil DJ9YW, DF9QX (449/549) #58 - my apologizes to Matthias for missing our sked on the 3rd, I totally overlooked it in the electronic news letter, plus we had unexpected company for the whole evening. I also want to thank both Matthias and Peter for picking up on the skeds for the no-show stations ... it sure helps out. I am open for skeds any day of the week. There are a large number of 23 cm stations in the directory, but I have no way of knowing how many are active, or for that matter who does or does not receive the NL. Please some skeds you active 23 cm EME'ers. [Darrell also notes that John, VE1ZJ, will be tailending all his skeds...time permitting.]

W1ZX, Willie

didn't work any skeds during the Feb SW because of snow and a high noise level. On 3 Feb at 0000 nil UA4API, 0100 nil SM3AKW, 0130 nil DL4MEA, 0200 nil RW3RW and 0230 nil F6CGJ - at this point the dish was filling up with snow, so Willie missed the remaining skeds, and sends his regrets to KA0RYT, N4PZ, K1VYU and JR9NWC, and on 4 Feb at 0100 nil DL4MEA, 0130 nil RW3RW, nil F6CGJ, at 0215 someone calling, but he didn't get the call, 0315 el problems; elevation screw froze up, (temp was 10 deg F, very unusual for Wash. DC area). The shear pin at the el motor broke, and he could not remove the broken shear pin in the dark. He again missed the skeds with KA0RYT, N4PZ and K1VYU. Willie notes that the phone number for the Comfort Inn, in last month's EME Conference Information, was wrong. The correct number is 301 464 0089, the FAX number is OK.

WA7TZY, Fred

writes -- Unfortunately my EME equipment is currently buried under 9" of snow and ice. With Arctic air slated to be with us for another week or so, it looks like we will not be participating in this month's skeds. We do look forward to participating in the European EME contest later this Spring.

WB5LUA, Al

writes -- My 5 m dish is working great on 3456, 5760, 10368, and more recently on 2304. I mounted the W2IMU feed offset about 3.6 deg from boresight. Sun noise measures 15 dB at a solar flux of 69 and moon noise is about 0.7 dB. Echoes are great, and I can hear them easily with 20 w in the shack ... transmit loss is about 1 dB. Here is my report for all bands. On 31 July, I worked I6PNN on 5760 (O/O) for initial #5. I put the 10 GHz feed in place for the VE3ONT weekend in Aug, and was fortunate

enough to work them. I worked SM4DHN for initial #2 (559/439), VE3ONT (O/O) #3, WA7CJO (559/O), G3WDG (O/O) #4 and G4KGC (O/O) - all on 20 Aug, on 3 cm, I added on 4 Sept WA5VJB (O/O) #5 and VE7CLD (M/M) #6, on 5 Sept WA6EXV (M/M) #7, on 16 Sept G3WDG (O/339) and OK1KIR (M/O) #8, on 8 Oct PA3CSG (M/O) #9, F6KSX (O/O) #10, WA7CJO (559/559) and DJ7FJ (O/O) #11, on 9 Oct, on 5760 OE9ERC (O/O) for initial #6 and repeat QSOs with OE9YTV (559/449) and OE9PMJ (559/449). My power on 5760 is 12 w at the feed! I worked on 15 Oct VE4MA on 5760 and my 23rd QSO with W4HHK (O/M) on 2304. On 1 Nov, I worked DL9EBL (579/559) on 2304/2320, and on 4 Nov DL9EBL on 3456 (579/559) on CW and (55/33) on SSB. During the 5 Nov contest weekend, I worked OE9ERC and W4HHK on 2304, OE9ERC and OE9XTW (club call) and VE4MA on 5760. On 1296, I worked OE9XXI, AA6WI, F6CGJ, KB2AH, WD5AGO, KD5RO, W4RDI for initial #120, K2UYH, W2UHI, K3EAV, VE4MA and AA4TJ, and on 7 Nov K9KFR on 3 cm (569/559) for initial #12, and another QSO with VE4MA on 1 Dec on 5760. On 18 Dec, I put the 5 meter dish on 2304, and worked W4HHK (559/549) for QSO #25 and then (44/44) on SSB. On 30 Dec my 45th birthday, I worked DF3RU (M/M) on 2304/2320 #30 and VE4MA (439/449) on 2304. I QSO'd on 7 Jan, on 1296, AA6WI, AA4TJ, DL0SHF #121 and W7GBI, and on 28 Jan DF3RU (O/O) on 2304/2320. My 24' dish is dedicated to 1296 now, with the 2304 feed permanently mounted offset on the 5 m dish. I can put in place the 3456, 5760 or 10368 feed with short notice, but I will probably leave the 10368 feed in place until activity picks up on 3456 and 5760. I now run 250 w on 3456, 12 w on 5760, and 75 w on 10368. My big 100 TWT on 5760 went belly up, so I am working on a solid state 40 w amplifier with hopes of 100 w soon. During the 4 Feb SW, on 1296, I worked W2UHI, OK1CA #122, KD5RO, K5JL, KB2AH and AA4TJ. I also worked LX1DB on 2304 (559/559) and (54/54) on SSB on 5 Feb. During my 2304 sked with the 5 m dish, I discovered how the viscosity of hydraulic fluid can prohibit the start of the hydraulic pump and limit the flow of fluid through the hydraulics I use for el. I guess I need a heater! I am open for skeds any time day or night, on any band. I now have a fax machine set up on my phone line that is operational during the day and early evening. I noticed that W0KJY had my 3 cm EME totals incorrect. Here are the corrected totals for all bands. 10368 #12, 8, 4; 5760 #6, 5, 0; 3456 #2, 2, 0; 2304 #30, 15, 7; 1296 #122, 27, 25; and 902 #5, 2, 3. Also VE4MA only has initial #2 on 3456, not 3.

ZS6AXT, Ivo

did not have a good start to his new year. He tripped while running to answer the teleephone, and crippled his leg. He is on the mend, but is still having problems with walking. He QSO=92d back on 2 Dec, on 1296, LA8LF, VK5MC and OH2AXH, nil in skeds from JA8ERE, ON4UV, G4DZU, WA7BBM, W0RAP and N7ART, heard were JA7BMB (M) and JR4AEP (O), on 432, K5GW (569/559) for initial #150, nil from PY5ZBU and K3HZO, heard were ON4KNG, DL8LV, HB9SV, G3HUL, HA1YA and W9QXP, and CWNR HP3XUG and SM3AKW; on 3 Dec, on 1296,

DF3RU, OE9XXI, HB9SV, IK3COJ, SM3CEW, VE1ZJ, SM3AKW, VE1ALQ and G3LQR, heard OH2AXH, LA8LF and KD5RO, CWNR AA4TJ - Ivo had problems with his PA and had to replace a faulty tube, on 432, SM3AKW and heard NP4Z; on 9 Dec, on 1296, DJ9YW; on 30 Dec, on 1296 with only 180 w, F1ANH on CW and SSB (44/33), OE9XXI on SSB (55/44), DJ9YW, DD1XF, JA4BLC, W2UHI, GW3XYW, KB2AH and N2IQU; on 6 Jan, on 1296, DF2RU, DD1XF, HB9BBDS and LA8LF, CWNR JA4BLC, F2TU and G4DZU; on 7/8 Jan, on 1296 conditions were excellent - echoes (569), but only SM3AKW, no others were heard on either 70 or 23 cm. Ivo is looking for someone to relay packet requests for skeds. He has lost his link with K1RQG and DL4EBY, and is having trouble getting into the 20 m net on a regular basis. [Can anyone help?]

K2UYH, Allen

The Feb SW was another frustrating one. KC2TA, Hank, came by to operate with me. Hank has previously operated some of the EME contests at K2UYH, but only recently moved close by, and will probably be a regular at my QTH during future SWs. Unfortunately, I was delayed, due to complications at work, and we missed the 1st sked with IN3KLO. It was already snowing by the time I made it home, but this was not yet a problem. 1st we discovered that the pol rotator was frozen and would not turn. Despite this limitation, we were QRV for our 2nd sked with DK8LV, but nil signals or echoes were heard. After quite a bit of "frustration" trying to figure out what was wrong with the system, I discovered that my Moon tables were in error, but in a subtle way, so that it was not real obvious. A check with a different Moon tracking program revealed the error, and resulted in echoes. We were on for the W0KRX sked, but heard nil from him (with no pol rotation). VE6TA had moved our sked to later, but by this time the snow and wind had picked up, making pointing difficult. We gave up for the night, and missed our KB6IGC sked. WA7TZY had already canceled his sked. The next day operation was impossible with more than 6" of snow on the ground and in the dish. I am hoping for better WX luck for 2/3 March when we will concentrate on 23 cm in the 1st part of the Eur EME Contest

NETNEWS

KB4WM still has not completed repairs to his dish.

W4HHK is in the deep freeze, and needs a resked with DF3RU on 13 cm.

K9BCT/M4 will be gone for 30 days.

WB6IMC will be QRV on 70 cm. He has been heard by K1FO, but may have relay problems.

DL3YEL is QRV on 70 again with 2 yagis.

NU7Z has a new 4 m dish with .4 f/d on the way. It should no be long before he is QRV again.

SM2CEW is now active on 70 and 23 cm with 2 feeds. Peter worked DD1XF on 23 cm.

OE3JPC plans to be more active on 70 cm EME.

DJ5RE is looking for skeds on 70 cm.

G4RGK antenna is not operational, and it will be about a month before he gets back on EME.

W0RAP's dish was destroyed in a storm. He is QRT and may be off for good.

KD4LT was away for the Feb SW.

DL8YHR is QRV on 70 cm with a 38 el M2 yagi and 200 w from 3V8BB PA.

WE7P will be QRV at the end of March. His E-mail address is WE7P

DJ7FJ will be active on 2/3 March on 23 cm, and on 10 GHz 3 weeks later.

K9ZZH is ready to go again on 23 cm EME.

KD5RO needs QSL cards from OE9ERC, W4RDI, EA6/DF5JJ, DD1XF, VE3BQN, VE1ZJ, HB9BBD and VK5MC.

N2IQU lost his 20 m beam in hi winds, but his big dish is OK!

WB0GGM has located a 12' dish, and hopes to be QRV soon on 23 cm.

K3HZO had to cancel all his Feb skeds.

LX1DB has on 70 cm 2000 w, on 23 cm 60 w in and 1500 w out from a YD1304, and on 2304 250 w.

DL9KR is working on an experimental vertical. Jan will not be around for the March SW.

DL4KG is a new 70 cm station with 4 yagis and 100 w in JO31. He was DL9KR's initial #638.

HB9BBD will be only active on 23 cm on Sunday during the March SW.

EA3DXU found activity very poor in Feb.

KA0RYT worked JA9BOH on 28 Jan on 70 cm.

F6HPP (Laurent Griffart, 23 Rue de la Victoire, 02200 SOISSONS) is QRV on 70 cm from (JN19) with 4 x 21 FT yagis and 1 KW. F5JJI is also now active on 70 cm from (JO10) with 2 x 12 el Jaybeams circularly pol and 140 w. His address is (Gilles Carlier, 5/20 Rue Verte, La Salamandre, 59650 VILLENEUVE D=92=C1SQ).

FOR SALE

VE1ALQ is looking for a **Johnson 19140 air variable**, or equivalent - E-mail: <u>VE1ALQ (or) VE1ALQ (*) Phone/FAX</u>: 1 506 738 2734.

HB9BHU wants a 50 w or greater 10 GHz TWT, and a WR75 waveguide switch. He has for sale/trade 70 cm cavities and good tubes: YL1050, YD1336, YD1334, TH338 and TH308.

W1ZX has for sale: a Bird 43 Watt Meter - Call, AIL 75 Noise Figure Meter with cabinet \$US300 & shipping, AILTECH 7616 Noise Source \$US250 & shipping, Several Transco "Y" type Relays with "N" Connectors \$US50 & shipping, Dynatech "D" type Relays with SC Connectors & 3=91 pigtail-jumper cables \$US30 & shipping, General Radio 1216A 30 MHz IF Amplifier with meter, great for reading Sun Noise & cold Sky to Ground Noise with a converter \$US50. Call Willie at 301 645 5584, 2000-2230 EST, FAX 301 645 6853, 24 hrs, Email W1ZX

WB5LBT has for sale an **IBM tracking board and interface box with A/D converter.** Bob is **looking for 23 cm equipment.**

W9QXP has an actuator for sale.

9H1PA is looking for a **TH-347 for 23 cm.**

KAORYT is still **looking for 6181 tubes.**

KB2AH is producing **VE4MA like 1296 feeds with built-in IMU type circular polarizer.** He also has a **complete line of 1296 HPAs** (6, 4, 2 or 1 x 7289 amps) available.